



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,229	06/21/2003	Mark J. Karol	502068-A-01-US (Karol)	9162
7590	03/19/2007		EXAMINER	
Richard C. Woodbridge Synnestvedt Lechner & Woodbridge LLP P.O. Box 592 Princeton, NJ 08542			MOORE JR, MICHAEL J	
			ART UNIT	PAPER NUMBER
			2616	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/19/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/601,229	KAROL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael J. Moore, Jr.	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 June 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 June 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## DETAILED ACTION

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 6/21/03 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

### ***Drawings***

2. The drawings are objected to because of the following informalities:

Figures 1-4 currently have some elements in handwritten form, which are unclear. A suggestion would be to submit a more formal version of these drawings in response to this Office Action.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The abstract of the disclosure is objected to because of the following informalities:

On each of lines 2 and 3, the word “particular” should be “particularly”.

Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 12 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Belanger et al. (U.S. 2003/0137938) (hereinafter “Belanger”). Belanger teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim 12, “a method for notifying users of an IP network of a problem in the transmission of a sequence of packets on the IP network, the transmission occurring from a signal origin point to a signal destination point” is anticipated by the notification of network congestion (problem) to users participating in communication

between endpoints 101, 102 (origin and destination points) as shown in Figure 1 and spoken of on page 2, paragraph 14.

"Detecting whenever at least one packet of the sequence has not been received at the signal destination point during a specified time interval" is anticipated by endpoint 101 that detects the dropping of packets (not been received) due to congestion by detecting holes in the packet sequence numbers as spoken of on page 2, paragraph 16, lines 8-19.

Lastly, "notifying the users of the problem" is anticipated by the notification mechanism that permits users to receive notice of presence of the congestion as spoken of on page 2, paragraph 14, lines 10-14.

Regarding claim 24, "a system for notifying users of an IP network of a problem in the transmission of a sequence of packets on the IP network, the transmission occurring from a signal origin point to a signal destination point" is anticipated by the notification of network congestion (problem) to users participating in communication between endpoints 101, 102 (origin and destination points) as shown in the network 100 (system) of Figure 1 and spoken of on page 2, paragraph 14.

"Means for detecting whenever at least one packet of the sequence has not been received at the signal destination point during a specified time interval" is anticipated by endpoint 101 (means) that detects the dropping of packets (not been received) due to congestion by detecting holes in the packet sequence numbers as spoken of on page 2, paragraph 16, lines 8-19.

Lastly, "means for notifying the users of the problem" is anticipated by the notification mechanism (means) that permits users to receive notice of presence of the congestion as spoken of on page 2, paragraph 14, lines 10-14.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 8-10, 13, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraser (U.S. 6,487,200) in view of Belanger et al. (U.S. 2003/0137938) (hereinafter "Belanger").

Regarding claim 1, *Fraser* teaches the using of a microprocessor in a network interface unit to detect periods of silence (silence periods) in a stream of packets (original packet sequence) as spoken of on column 10, lines 51-53.

*Fraser* also teaches the insertion of a silence marker (keep-alive signal) in a speech packet upon the detection of silence as spoken of on column 10, lines 53-56.

*Fraser* also teaches the immediate transmission of the packet with silence marker (modified packet sequence) as spoken of on column 10, lines 56-57.

*Fraser* does not teach detecting a potential problem in the packet transmission sequence by detecting whenever at least one packet of the modified packet sequence has not been received at the signal destination point during a specified time interval.

However, *Belanger* teaches a congestion (problem) reduction method in a network where endpoint 101 detects the dropping of packets (not been received) due to congestion by detecting holes in the packet sequence numbers as spoken of on page 2, paragraph 16, lines 8-19.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claim 8, *Fraser* does not teach where the IP network is administered by a network manager, and where the network manager is notified of the potential problem with the network.

However, *Belanger* teaches endpoint 101 in the network of Figure 1 under the control of a network service provider (network manager) that detects congestion conditions as spoken of on page 2, paragraph 14.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claim 9, *Fraser* teaches the transmission of packet sequences shown in Figure 2 over routing paths as shown in Figure 1 via multiple network components.

*Fraser* does not teach detecting a plurality of potential problems; and identifying a component common to the detected potential problems.

However, *Belanger* teaches the detection of congestion by network nodes 110-115 via monitoring of respective buffers (components) as spoken of on page 2, paragraph 15.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claim 10, *Fraser* teaches the insertion of a silence marker (keep-alive signal packet) in a speech packet upon the detection of silence as spoken of on column 10, lines 53-56.

*Fraser* also teaches the immediate transmission of the packet with silence marker (modified packet sequence) as spoken of on column 10, lines 56-57.

*Fraser* does not teach detecting a potential problem in the packet transmission sequence by detecting whenever at least one packet of the modified packet sequence has not been received at the signal destination point during a specified time interval.

However, *Belanger* teaches a congestion (problem) reduction method in a network where endpoint 101 detects the dropping of packets (not been received) due to congestion by detecting holes in the packet sequence numbers as spoken of on page 2, paragraph 16, lines 8-19.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claim 13, *Fraser* teaches the using of a microprocessor (means) in a network interface unit of system 101 of Figure 1 to detect periods of silence (silence periods) in a stream of packets (original packet sequence) as spoken of on column 10, lines 51-53.

*Fraser* also teaches an encoder (means) that inserts a silence marker (keep-alive signal) in a speech packet upon the detection of silence as spoken of on column 10, lines 53-56.

*Fraser* also teaches the immediate transmission of the packet with silence marker (modified packet sequence) by the microprocessor (means) as spoken of on column 10, lines 56-57.

*Fraser* does not teach a means for detecting a potential problem in the packet transmission sequence by detecting whenever at least one packet of the modified packet sequence has not been received at the signal destination point during a specified time interval.

However, *Belanger* teaches a congestion (problem) reduction method in a network where endpoint 101 (means) detects the dropping of packets (not been received) due to congestion by detecting holes in the packet sequence numbers as spoken of on page 2, paragraph 16, lines 8-19.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claim 22, *Fraser* teaches an encoder (means) that inserts a silence marker (keep-alive signal packet) in a speech packet upon the detection of silence as spoken of on column 10, lines 53-56.

*Fraser* also teaches the immediate transmission of the packet with silence marker (modified packet sequence) by the microprocessor (means) as spoken of on column 10, lines 56-57.

*Fraser* does not teach a means for detecting a potential problem in the packet transmission sequence by detecting whenever at least one packet of the modified

packet sequence has not been received at the signal destination point during a specified time interval.

However, *Belanger* teaches a congestion (problem) reduction method in a network where endpoint 101 detects the dropping of packets (not been received) due to congestion by detecting holes in the packet sequence numbers as spoken of on page 2, paragraph 16, lines 8-19.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

9. **Claims 2-4, 6, 7, 11, 14-16, 18-21, and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Fraser* (U.S. 6,487,200) in view of *Belanger* et al. (U.S. 2003/0137938) (hereinafter “*Belanger*”) and in further view of *Huart* et al. (U.S. 2006/0122835) (hereinafter “*Huart*”).

Regarding claims **2, 11, 14, and 23**, *Fraser* in view of *Belanger* teaches the method of claims **1 and 10** as well as the system of claims **13 and 22**, respectively.

*Belanger* further teaches the use of RTP data transmission on page 2, paragraph 18.

*Fraser* in view of *Belanger* does not teach where the keep-alive signal comprises RTCP packets.

However, *Huart* teaches a method of packet voice reconstruction where RTCP packets are used in conjunction with determined silence intervals as spoken of on page 3, paragraph 31, lines 15-21.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the RTCP teachings of *Huart* with the teachings of *Fraser* in view of *Belanger* in order to provide keep-alive packets using a known signaling protocol for RTP data transmission.

Regarding claims **3 and 15**, *Belanger* further teaches the use of RTP data transmission on page 2, paragraph 18.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claims **4 and 16**, *Belanger* further teaches the notification mechanism that permits users to receive notice of presence of the congestion as spoken of on page 2, paragraph 14, lines 10-14 as well as the periodic quality reports sent back to senders as spoken of on page 2, paragraph 18.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective

management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claims **6, 7, 18, and 19**, *Belanger* further teaches the notification mechanism that permits users to receive notice of presence of the congestion as spoken of on page 2, paragraph 14, lines 10-14 as well as the periodic quality reports sent back to senders as spoken of on page 2, paragraph 18.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claim **20**, *Belanger* further teaches endpoint 101 in the network of Figure 1 under the control of a network service provider (network manager) that detects congestion conditions as spoken of on page 2, paragraph 14.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

Regarding claim **21**, *Belanger* further teaches the detection of congestion by network nodes 110-115 via monitoring of respective buffers (components) as spoken of on page 2, paragraph 15.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the congestion detection teachings of *Belanger* with the teachings of *Fraser* in order to provide a system with effective management of network capacity as spoken of on page 1, paragraph 5, lines 9-13 of *Belanger*.

10. **Claims 5 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Fraser* (U.S. 6,487,200) in view of *Belanger et al.* (U.S. 2003/0137938) (hereinafter “*Belanger*”) and in view of *Huart et al.* (U.S. 2006/0122835) (hereinafter “*Huart*”) and in further view of *Gregson* (U.S. 6,819,655).

Regarding claims **5 and 17**, *Fraser* in view of *Belanger* and in further view of *Huart* teaches the method of claim **4** and the system of claim **16**, respectively.

*Fraser* in view of *Belanger* and in further view of *Huart* does not teach where the notification comprises providing an estimated time to repair.

However, *Gregson* teaches in block 130 of Figure 1 how if a technician detects a network problem, a network operations center will subsequently notify a network user of the nature of the problem and the time needed to restore normal network operation as spoken of on column 2, lines 42-57.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the notification teachings of *Gregson* with the teachings of *Fraser* in view of *Belanger* and in further view of *Huart* in order to provide network users with useful information regarding the availability of network services.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Starr et al. (U.S. 7,120,122) as well as Lide et al. (U.S. 6,657,997) are other references considered pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (7:30am - 4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mjm MM

Michael J. Moore, Jr.

Examiner

Art Unit 2616

Seema S. Rao

SEEMA S. RAO

3115107

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600